

## **REMARKS/ARGUMENTS**

### **Status of the Application**

Prior to the entry of this amendment, claims 1-24 were pending in this application. The Office Action rejected claim 24 under 35 U.S.C. § 101 as being directed to non-statutory subject matter, rejected claims 1-8, 10, 11 and 15-20 under 35 U.S.C. § 102(a) as being anticipated by the Brancato reference, rejected claims 21-24 under 35 U.S.C. § 103(a) as being unpatentable over the Brancato reference and rejected claims 9 and 12-14 under 35 U.S.C. § 103(a) as being unpatentable over the Brancato reference in view of the Badawy reference.

The present amendment amends claims 1 and 6 and cancels claims 16-24. Therefore, claims 1-15 are presented for examination in this amendment. No new matter is added by the amendments to claims 1 and 6 and support for the amendments may be found, *inter alia*, in Fig. 1, at page 1, line 30 through page 3, line 7, at page 4, lines 14-33 and at page 14, lines 10-13. Reconsideration of the claims as amended is respectfully requested.

### **35 U.S.C. § 101 Rejections**

In response to the Office Action, Applicants have canceled claim 24, thereby providing that the Section 101 rejection is now moot.

### **Section 102 & 103 Rejections**

The Office Action rejected claims 1-8, 10, 11 and 15-20 under 35 U.S.C. § 102(a) as being anticipated by the Brancato reference, rejected claims 21-24 under 35 U.S.C. § 103(a) as being unpatentable over the Brancato reference and rejected claims 9 and 12-14 under 35 U.S.C. § 103(a) as being unpatentable over the Brancato reference in view of the Badawy reference.

Applicants have amended independent claim 1 to emphasize that the method of the present invention concerns the detection of microseismic events generated by hydrocarbon

extraction activities. Further, Applicants have added the feature to independent claim 1 that the monitoring of the microseismic events is performed using seismic receivers positioned in a borehole.

The Brancato and Badawy references each concern analysis of earthquakes using seismic data collected at different seismic monitoring stations. Neither the Brancato nor the Badawy reference makes any mention of or suggestion regarding the monitoring of microseismic events, which events would produce signals that would be too small for the methods and systems described in Brancato and Badawy to detect. Additionally, neither the Brancato nor the Badawy reference provides any teaching or any suggestion regarding detecting microseismic events generated by hydrocarbon extraction activities. Furthermore, neither the Brancato nor the Badawy reference teaches or suggests the feature of independent claim 1 as amended of using receivers in a borehole to detect microseismic events generated by hydrocarbon extraction activities. To the contrary the teachings of Brancato and Badawy, which each describe the use of seismic stations to monitor earthquake activity, are not applicable to microseismic event detection. Therefore, the Brancato and Badawy references, whether considered individually or in combination, do not teach or suggest all of the limitations of independent claim 1 as amended.

Consequently, Applicants respectfully request that the Section 102 and Section 103 rejection of independent claim 1 as amended be withdrawn and that the Section 102 and Section 103 rejections of the claims depending from amended independent claim 1 also be withdrawn.

### **CONCLUSION**

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

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Amendment dated November 19, 2008  
Reply to Office Action dated June 23, 2008

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In the event that a fee or refund is due in connection with this Amendment, the Commissioner is hereby authorized to charge any underpayment or credit any overpayment to Deposit Account No 19-0615. If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (617)768-2421.

Respectfully submitted,

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